State Water Board Workshop
East San Joaquin Petition

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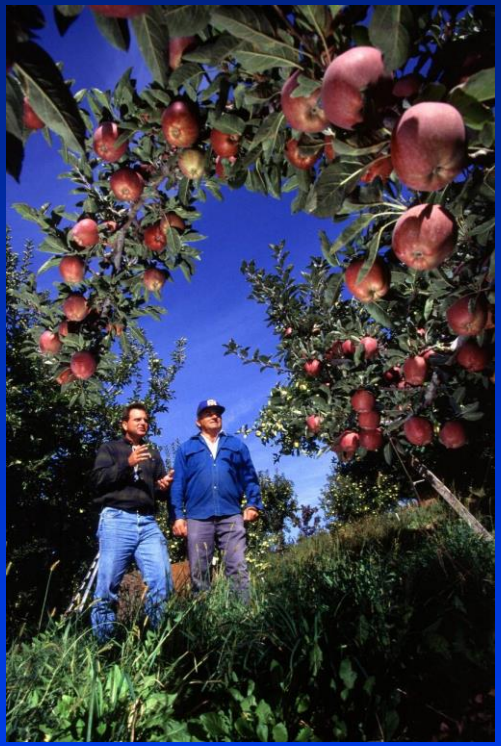
4 May 2016

Outline

- Background
- Current Program
- Proposed Changes
  - Domestic Well Monitoring
  - A/R Targets and MPEP
  - Irrigation Certification
  - Field Level Reporting
  - Surface Water Program
- Implications
- Recommendations



Central Valley Water Board

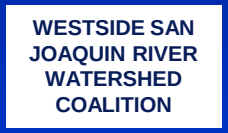
- ~ 40% of State's land area
- ~75% of State's irrigated agriculture (~7 million acres)
- ~ 40% of State's population that drinks groundwater

Timeline of Central Valley ILRP

Stakeholder Engagement

- Over 13 years
- Transparent process
- Comprehensive CEQA effort
- Evaluated cost and workload versus need for monitoring and reporting

ILRP Stakeholders

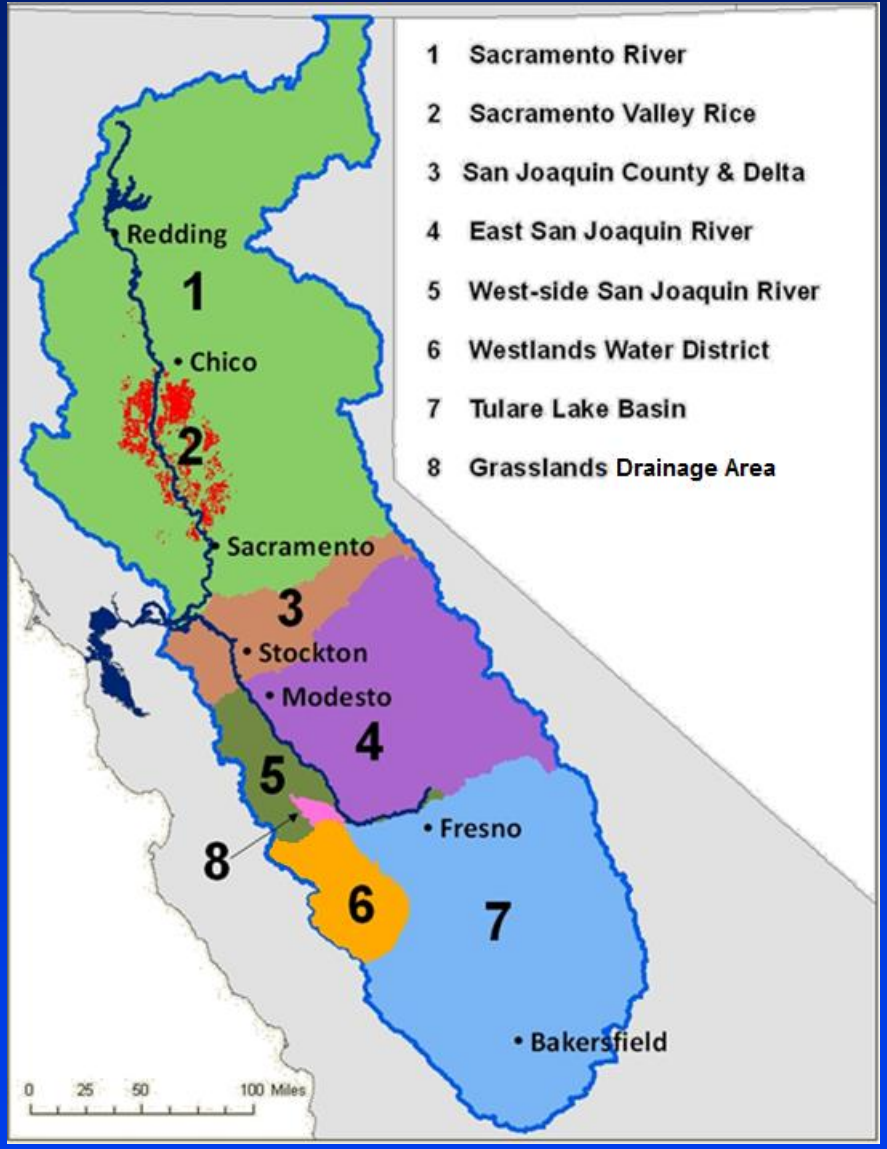


San Joaquin County and Delta Water Quality Coalition

Nine ILRP General WDRs

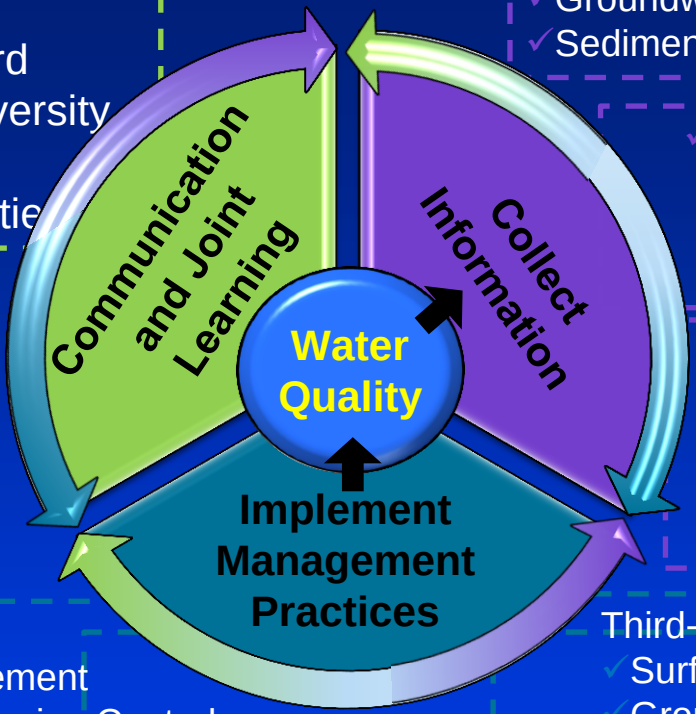
- 7 geographic
- 1 commodity
- 1 individual

14 Coalitions



- ✓Growers
- ✓Third-party
- ✓Regional Board
- ✓Agencies/University
- ✓CV-SALTS
- ✓Interested parties

Third-party assessments:
- ✓Groundwater Quality
- ✓Sediment Discharge and Erosion



- ✓Water Quality Monitoring
- ✓Management Practices Evaluation Program
- ✓Special studies

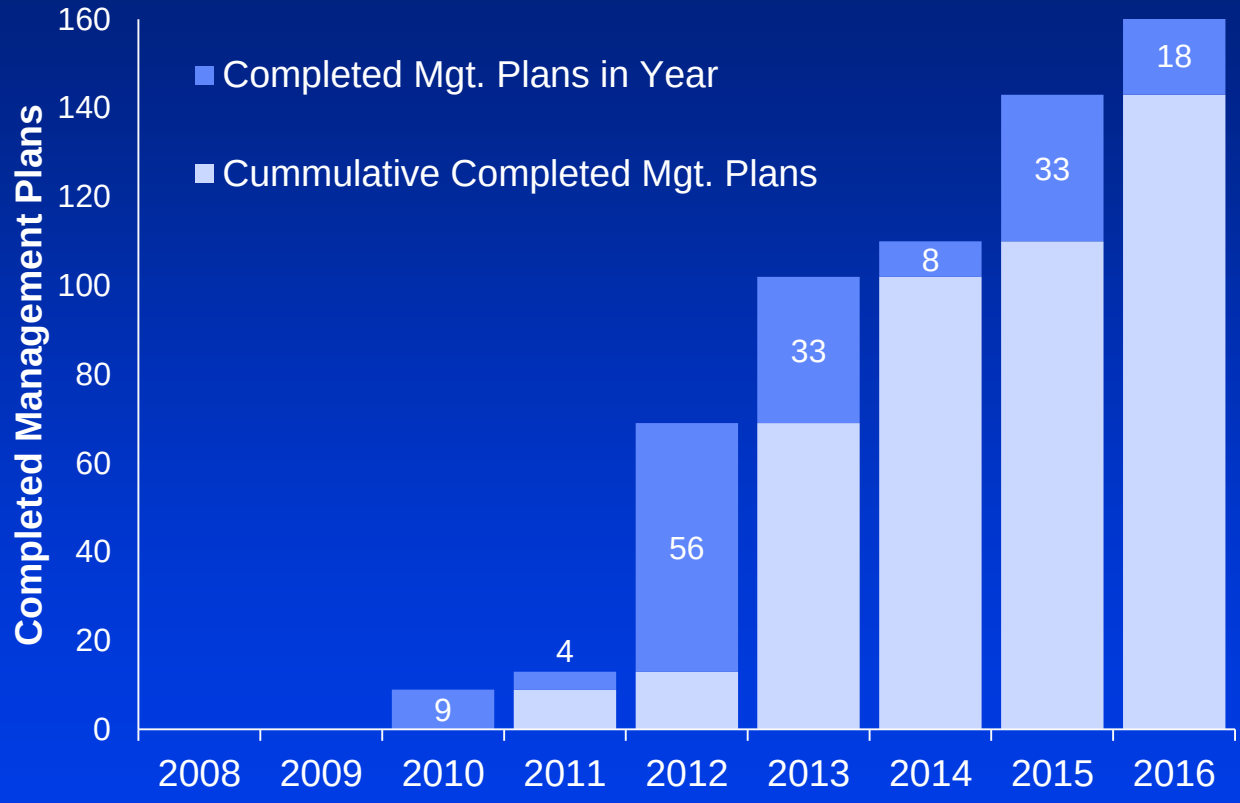
Grower reports:
- ✓Farm Evaluations /Practices
- ✓Nitrogen Management Summary Reports

Grower plans:
- ✓Nitrogen Management
- ✓Sediment and Erosion Control

Third-party management plans:
- ✓Surface Water Quality
- ✓Groundwater Quality

Growers implement practices:
- ✓Consistent with Plans
- ✓Meet Performance Standards

ILRP Success

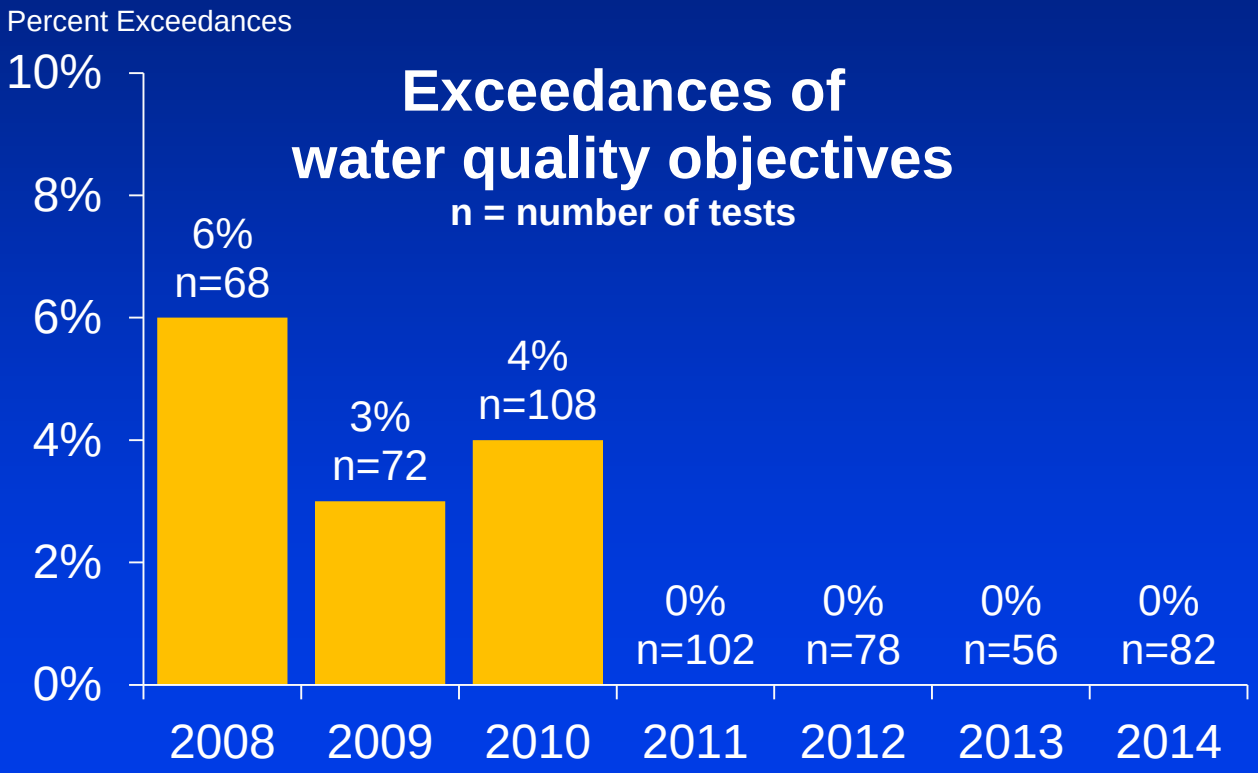


ILRP Success

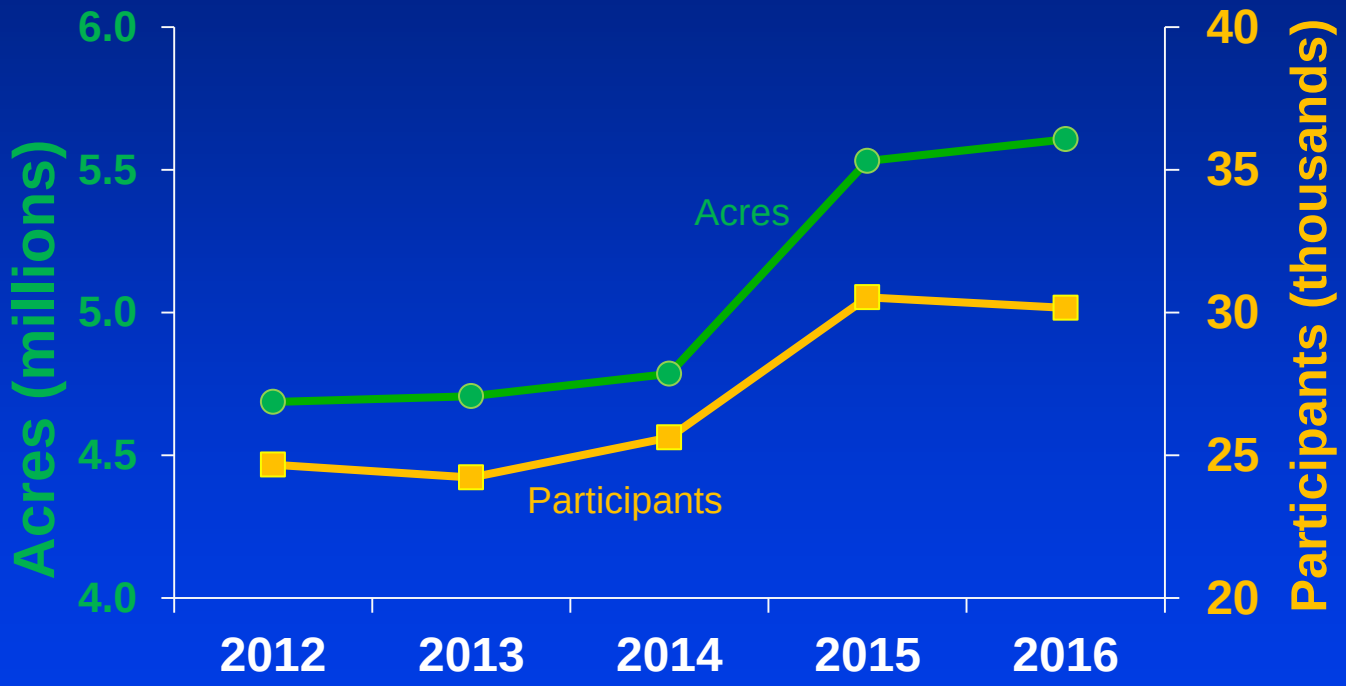
- San Joaquin River listed as impaired by diazinon in 1992
- ILRP required practices improved water quality

Delisting of diazinon for San Joaquin River US EPA Success Story

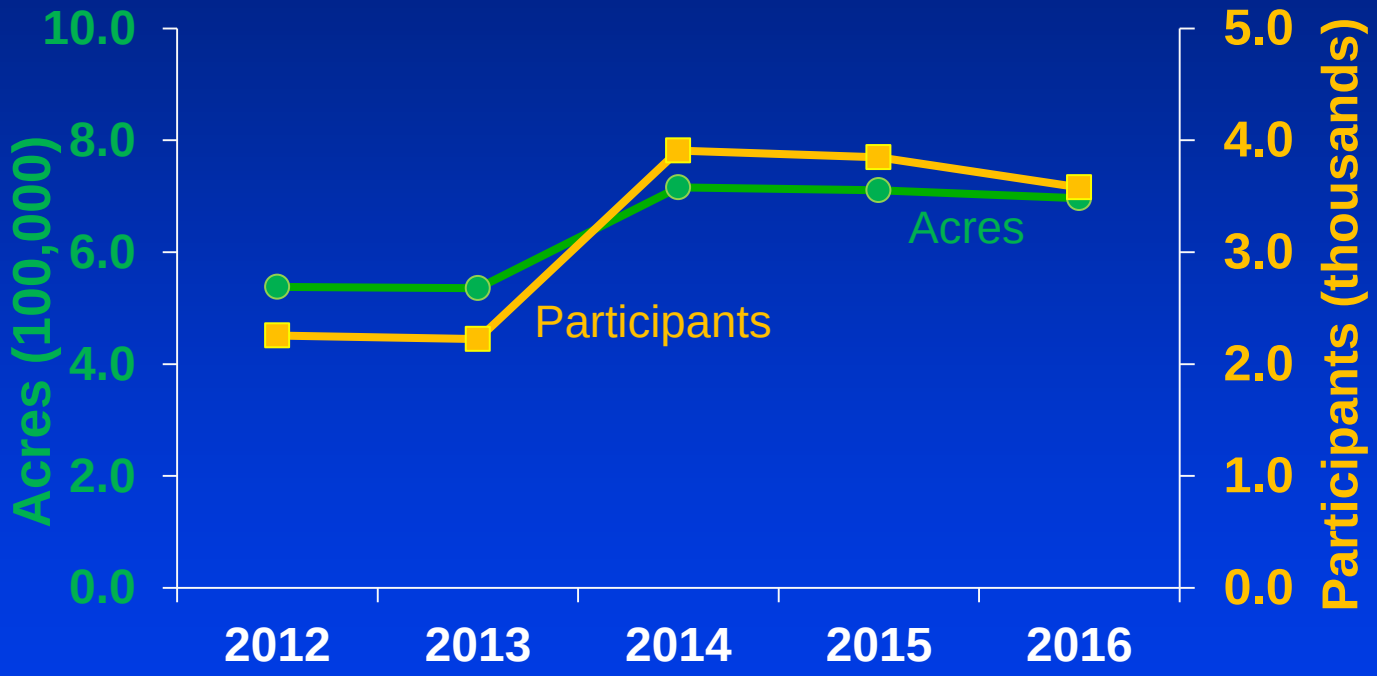
Diazinon and Chlorpyrifos San Joaquin River



ILRP Enrollment Success



East San Joaquin Enrollment



ILRP Sediment Control Success

Before

After

Other Agricultural Successes

- Rice Pesticide Program
  - Fish kills eliminated
  - Drinking water protected
  - No grower information needed
- Grassland Bypass
  - Delisting of selenium impairments
  - 95% selenium load reduction since 1995
  - US EPA Success Story

Draft State Board Order

- Groundwater Program
- Data and Reporting
- Surface Water Monitoring
- Program Transparency
- ILRP Effectiveness
- Education and Outreach
- Staff Impacts
- 13267 & CEQ Concerns

Groundwater Protection Program

Current Groundwater Program

- Assessment Reports
- Nitrogen Management Plans
- Management Plans
  - Implement practices to met water quality objectives
- Trend Monitoring Program
- Management Practices Evaluation Program (MPEP)
  - Science-based program to evaluate effects of irrigated agricultural practices on groundwater quality

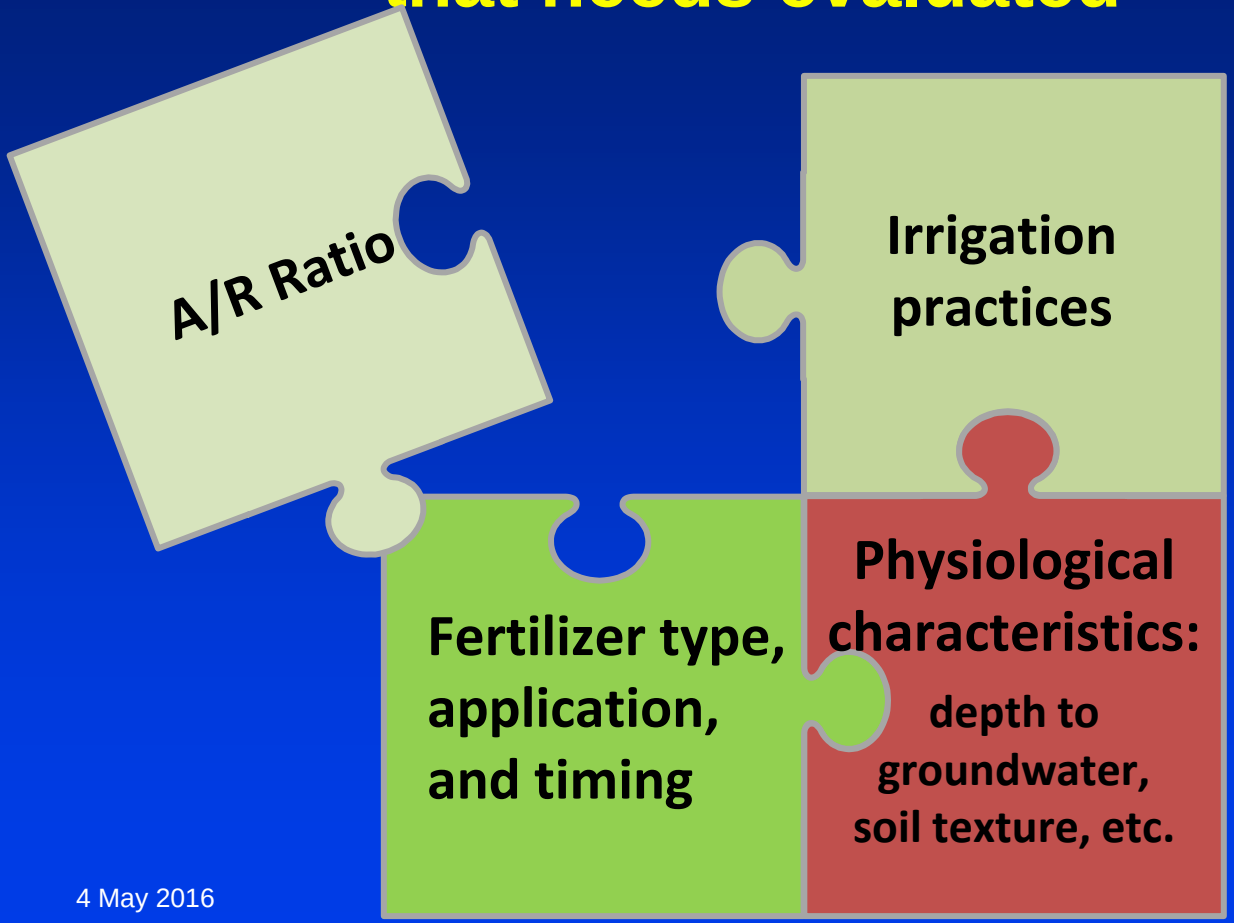
Current Groundwater Program

- A/R ratio reporting required
- Data provided on township level with statistical summary by crop (range, percentiles, outliers)
- Outliers targeted for outreach
- Board can request individual grower information
- Summary of A/R data due summer 2016

Proposed Groundwater Changes

- 3-year running average A/R ratio as proxy for groundwater monitoring
- A/R targets within 3 years of available nitrogen removed coefficients
- Significant concerns
  - A/R ratio as primary regulatory metric
  - Correlation approach

A/R key element of management practices that needs evaluated



A/R Concerns

- Protection of groundwater is complex
- Research needed
- Supply wells will not verify groundwater protected

Current Program
Management Practices Evaluation Program

- Science and research based program
  - Effects of water quality
- Consideration of site specific conditions
- Flexibility in developing robust program
- Pilot projects and modeling
- Monitoring to verify performance

Proposed Order Correlation Approach

- Evaluate correlation between all field level data provided for practices and A/R with water quality data
  - Determine effectiveness/ineffectiveness of practices
  - Determine appropriate A/R
  - Determine groundwater protected
- Extremely concerned this approach will fail in adequately protecting groundwater

MPEP Supported by Expert Panel

"A special case would be extensive monitoring and proper evaluation of data from a shallow water table (e.g., with the water table located 5-8 feet below the soil surface), which will exhibit a rapid response to deep percolation (below the root zone) water and nitrate flows. "

MPEP Supported by Expert Panel

- "Just because one can examine shallow water tables and get a reasonable answer, is this the best option available for the nitrate problem?"

MPEP Supported by Dairy Work

- MPEP approach is valid
- Representative Monitoring Program by Dairy Program successfully implemented
- Providing good results and information to the Board
- Informs Board, industry and public

Proposed Drinking Water Monitoring

- All domestic wells on ILRP operations
- Notification of Users
  - Member provide notice when landowner
  - Central Valley Water Board notifies users when member is not landowner

Assign joint responsibility to landowners and operators for user notification

Implications

- Data review and user notification will likely utilize all existing ILRP staff
- Focuses only on nitrates in groundwater for farms
- QA/QC concerns

More holistic approach needed

- Address all constituents of concern
- Leverage resources from agencies
- Address QA/QC
- Better potential for funding

Irrigation Nitrogen Management Plans

- Support inclusion of irrigation management
- Concern - availability of qualified certifiers

Support more time to prepare irrigation certification training for professionals and growers

Reporting and Data Management

Increased Grower Reporting

ESJ Order: Low Vulnerability (Applies to 45% of acreage)

- 1) Notice of Intent
- 2) Farm Evaluation (5-yearly)
- 3) SECP (as conditions change)
- 4) NMP (annual)

ESJ Order: High Vulnerability (Applies to 55% of acreage)

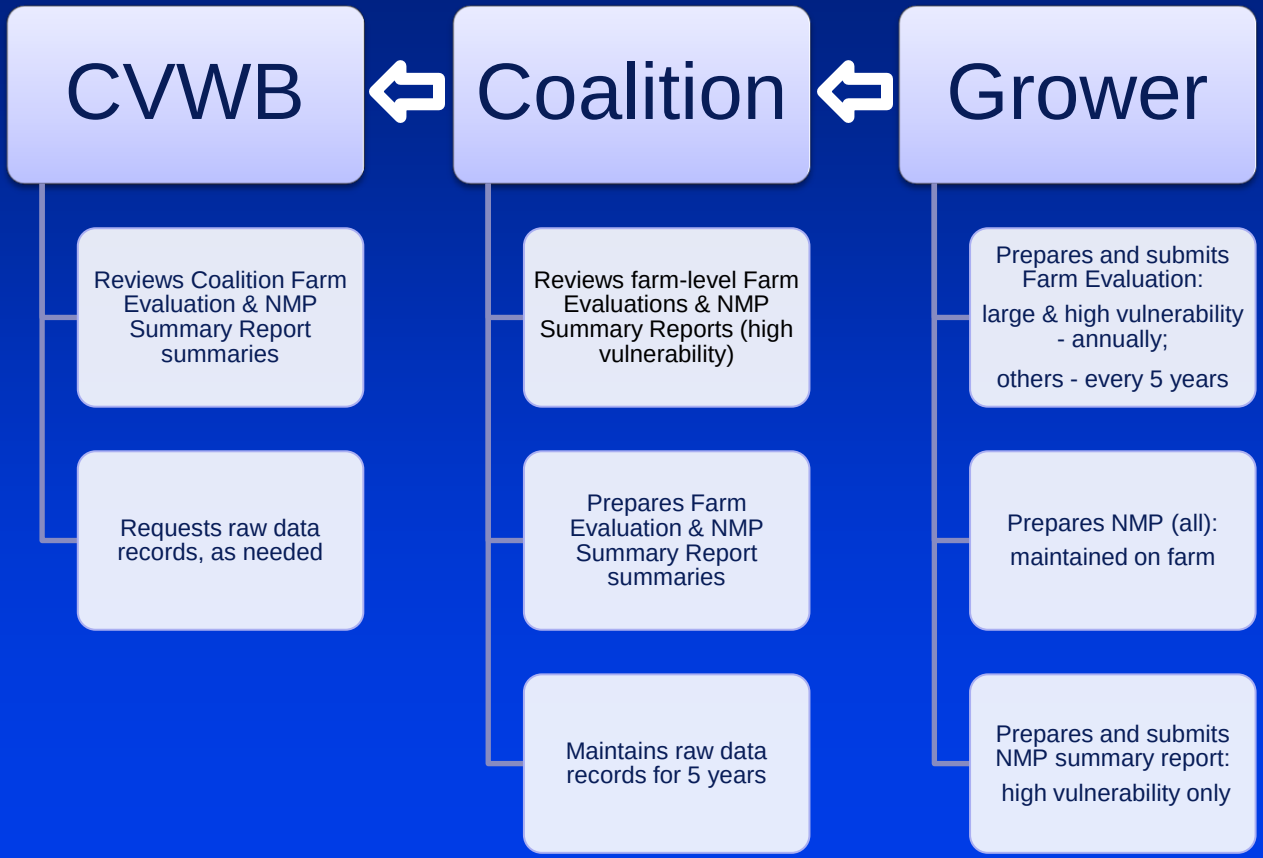
- 1) Notice of Intent
- 2) Farm Evaluation (annual)
- 3) SECP (as conditions change)
- 4) Certified NMP (annual)
- 5) NMP Summary Report (annual)

Draft Order (Increased Reporting, Applies to all Growers)

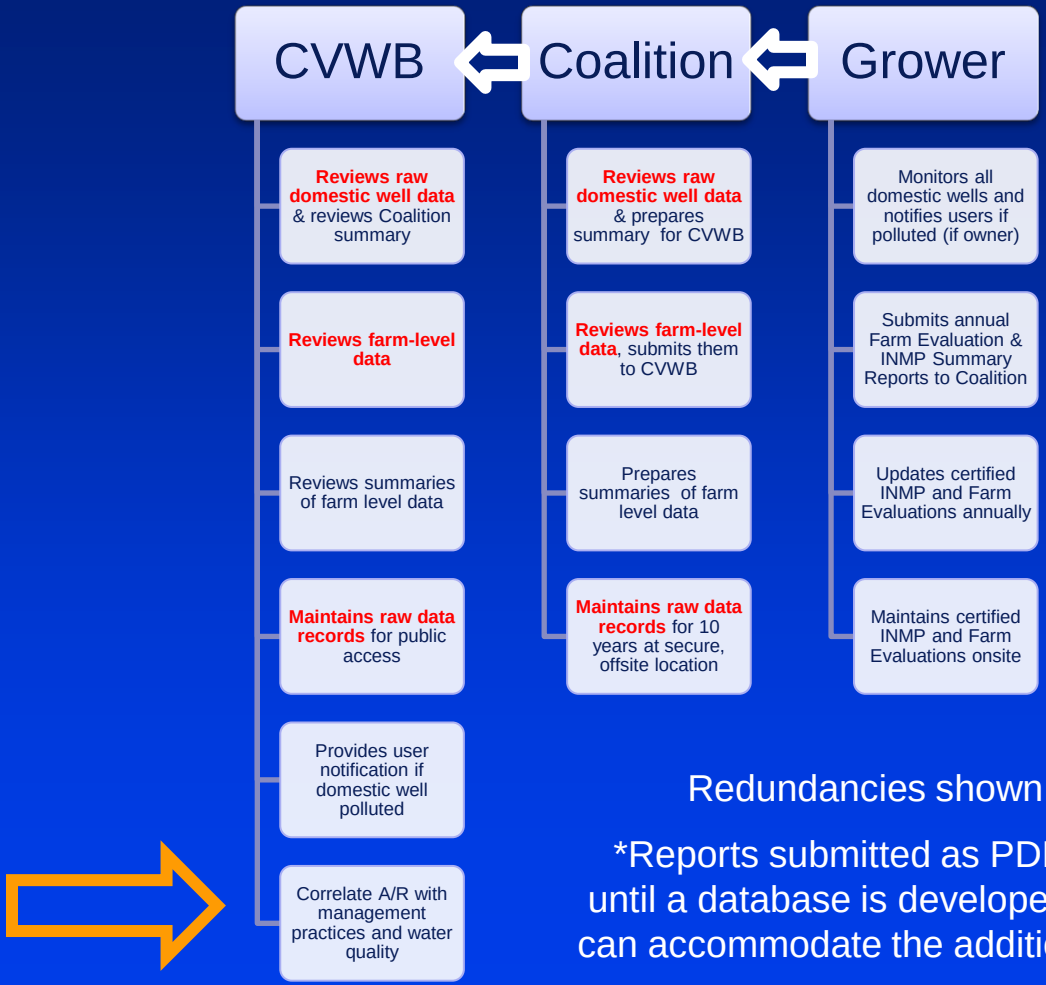
- 1) Notice of Intent
- 2) Farm Evaluation (annual)
- 3) SECP (as conditions change)
- 4) Certified INMP (annual)
- 5) INMP Summary Report (annual)
- 6) DW Data to GeoTracker
- 7) DW Data to CVWB
- 8) DW Data to Coalition

- *Note: 5 additional reporting requirements for LV and 3 additional for HV Growers.*

Current Reporting/Data Management Elements Affected by Draft Order

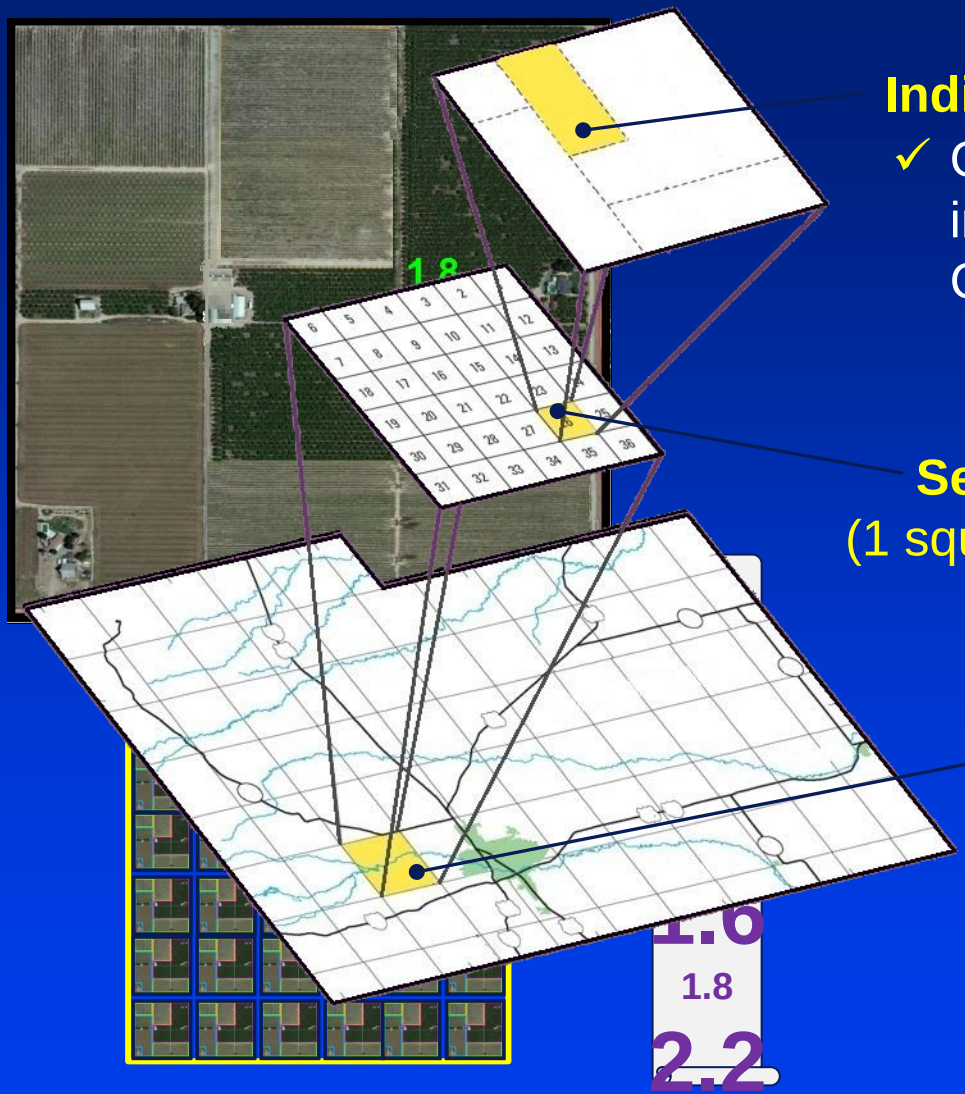


Increased and Redundant Data Management



Redundancies shown in red

*Reports submitted as PDF or excel files until a database is developed or Geotracker can accommodate the additional information.



Individual parcels

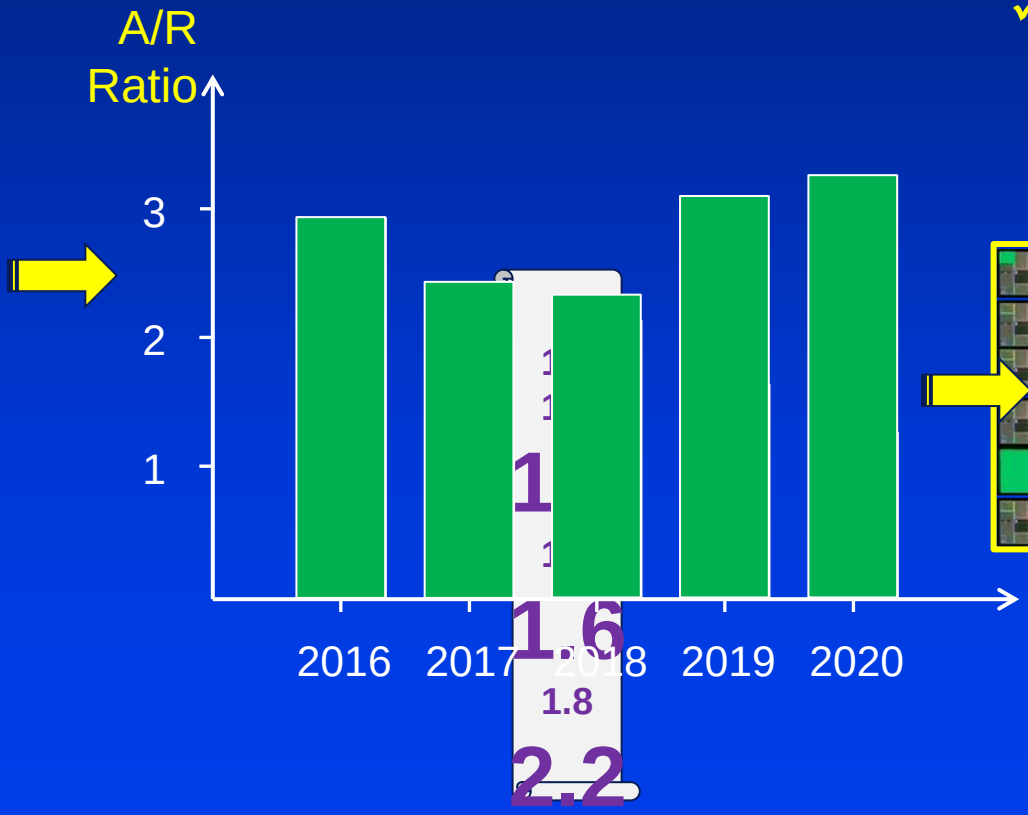
✓ Growers submit information to Coalition

Section
(1 square mile)

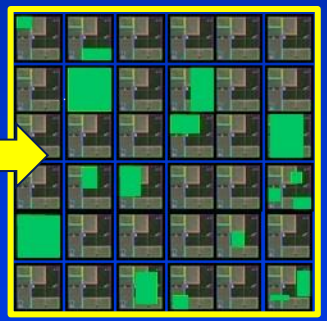
Township
(36 square miles)

✓ Coalition reports data by township

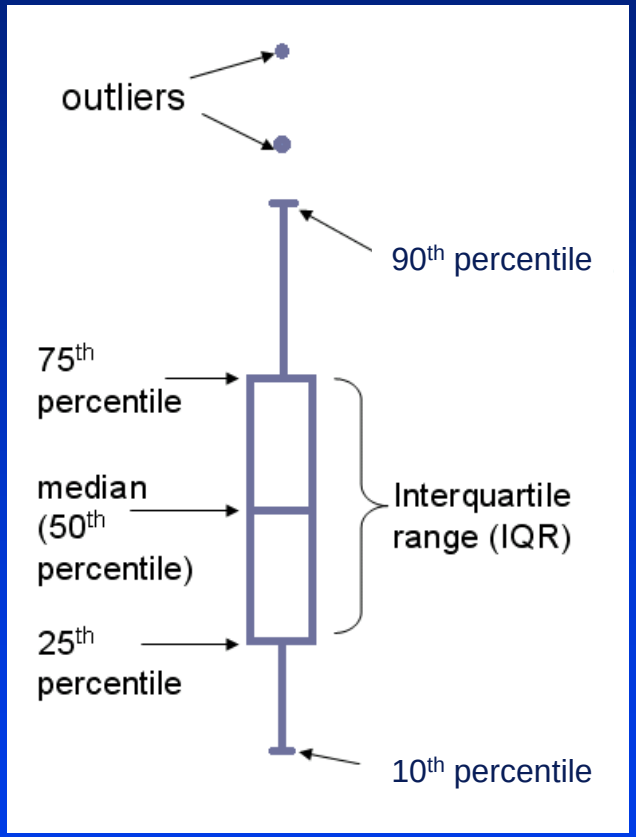
Data Summarized by Township

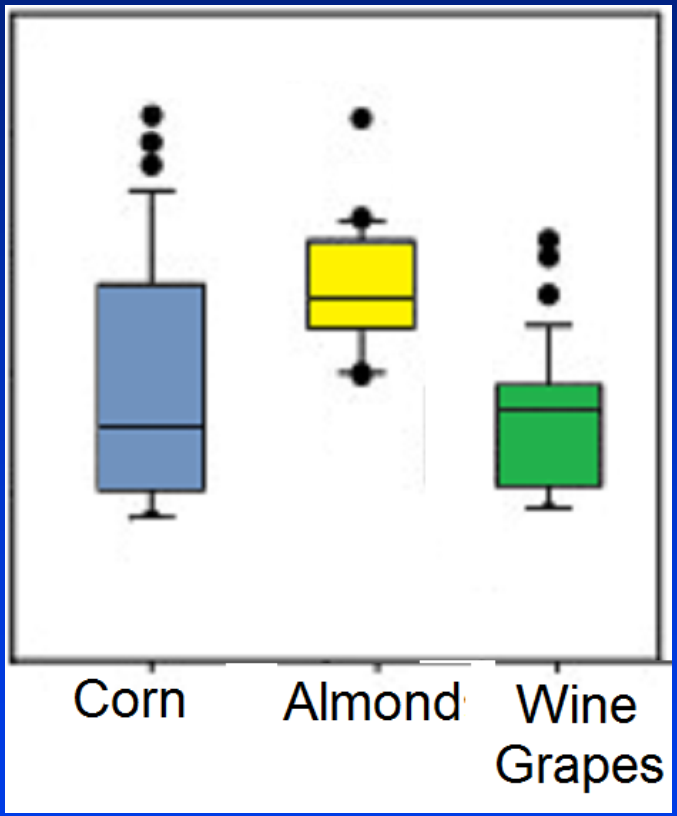


- ✓ Identify individual parcels if needed



Box-and-Whisker Plots





Surface Water Protection Program

Current Surface Water Program

- How we got here -
  - 13 years of experience
  - Technical Issues Committee
  - Scientific expertise
  - Consensus-based Recommendations
  - 3rd Party Technical Review & Monitoring Design Guidance
  - Adaptive, flexible, and balanced approach

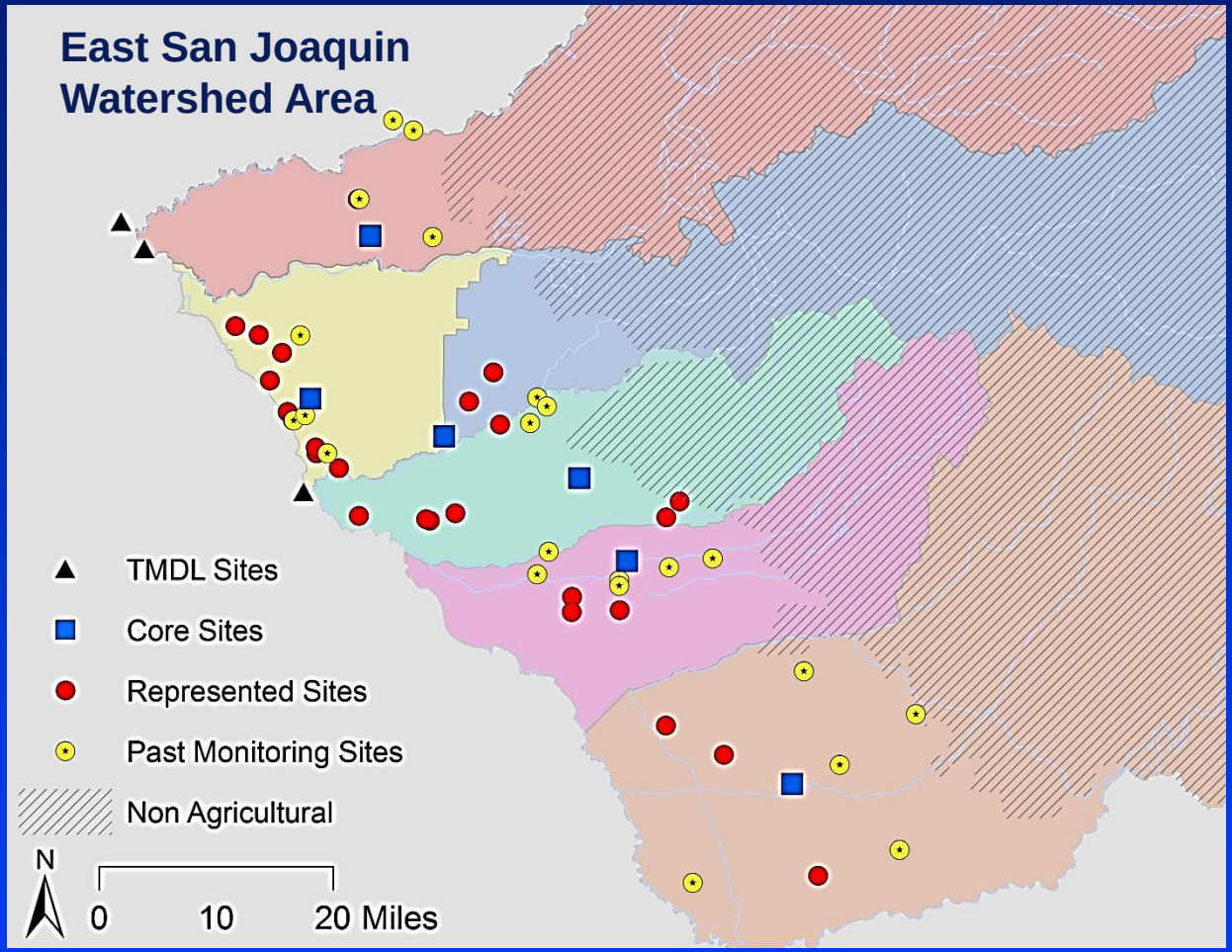
Current Surface Water Program

- Balances costs and needs
- Requirements:
  - Core sites
  - Represented sites
  - Special Project and Follow-up sampling
  - Sediment and Erosion Control Plans
  - Annual summary of monitoring results & trend analysis
  - Annual summary of management practices

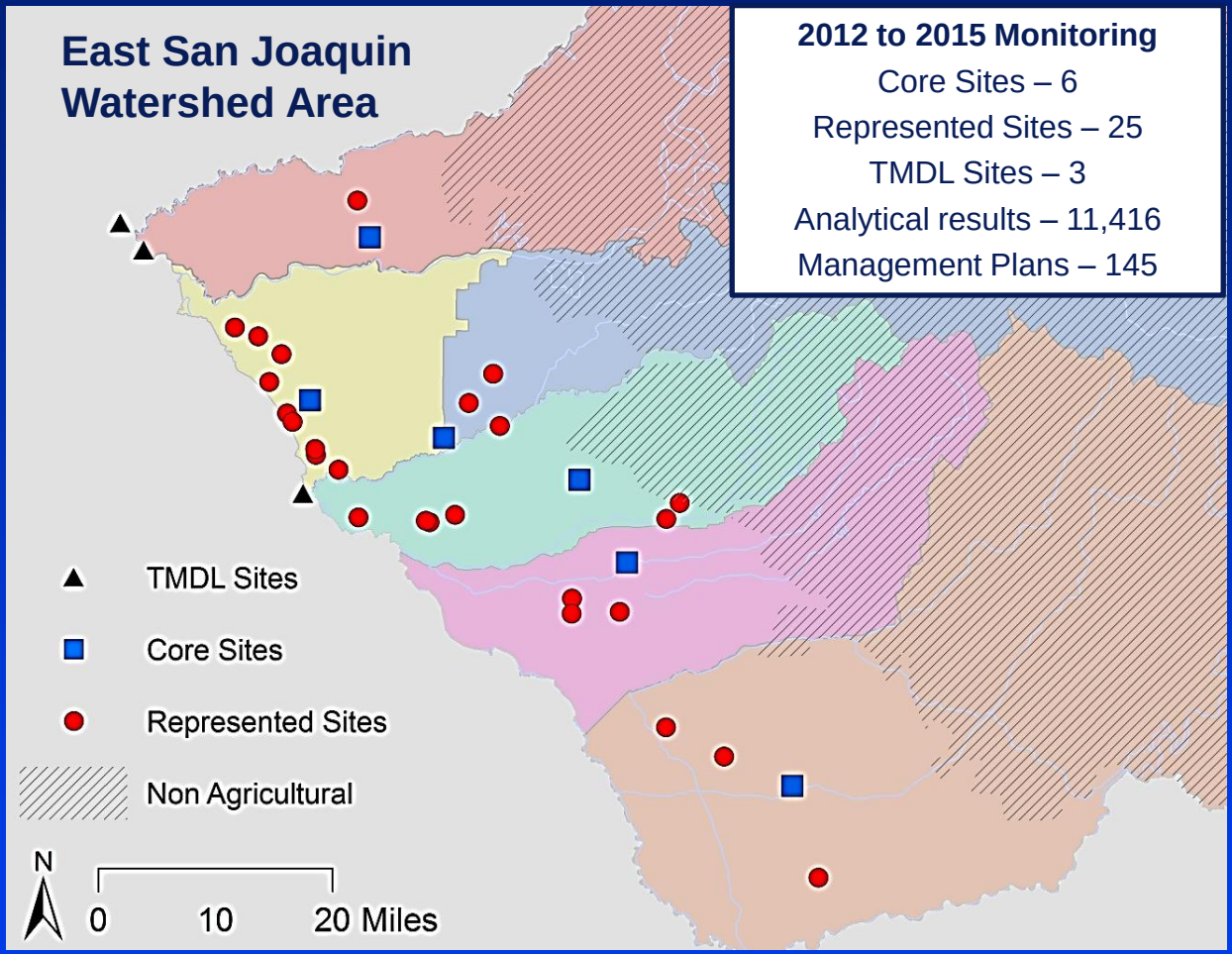
Current Surface Water Program

- Management Plans
  - Identify potential sources
  - Measureable performance goals
  - Schedule and milestones
  - Outreach and education
  - Rigorous criteria for completion (monitoring results, outreach, management practice implementation, & effectiveness of practices)

Current and Past Monitoring Sites



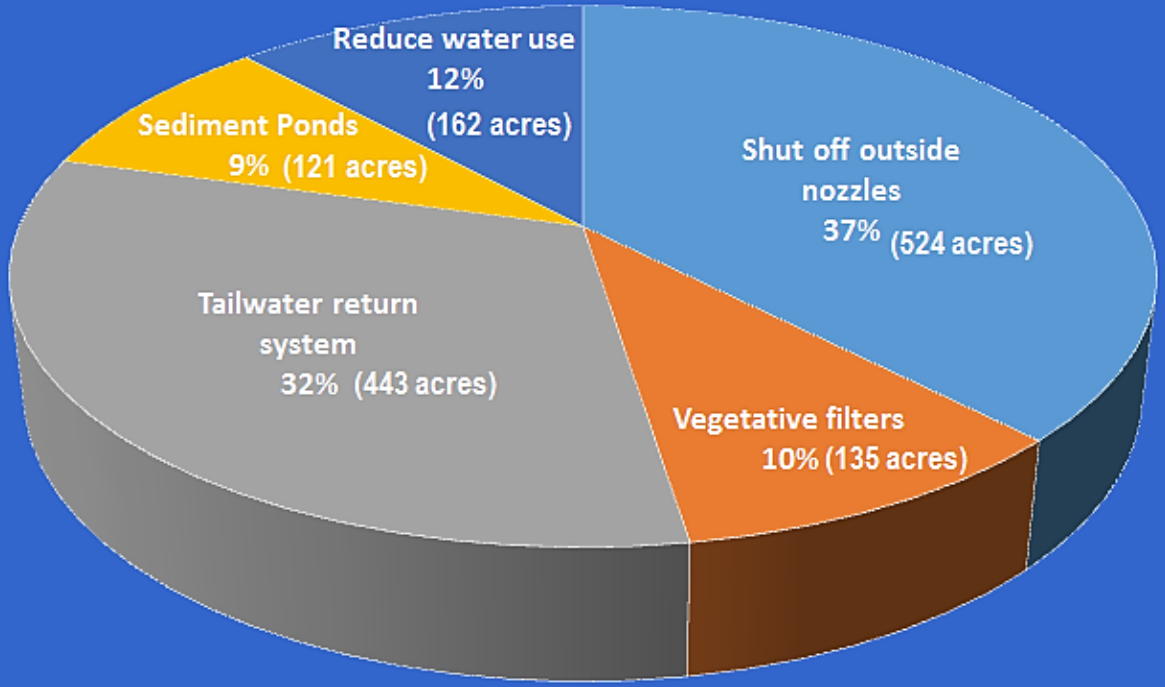
Current Monitoring Sites



Representative Monitoring Strategy

Improving Water Quality

Implemented Management Practices



Dry Creek Pesticide and Toxicity Management Plans

Proposed Surface Water Monitoring Revisions Not Justified

1. Nonpoint Source Policy's requirement for sufficient feedback mechanism
2. Adequacy of monitoring site density to identify water quality problems
3. Link between management practices, monitoring/reporting, & water quality

Program Transparency

- All plans, reports, and EO letters are posted on newly updated website
- Pesticide evaluation protocol
- Nitrogen management technical advisory workgroup
- Quarterly stakeholder meetings

Implications for ILRP Effectiveness

- A/R ratios need to be combined with science-based MPEP
- Viability of Coalitions
- Domestic well user notification will consume ILRP staff
- Data overload

Implications for ILRP Effectiveness

- Education and Outreach
  - Role of Coalitions critical
  - Smaller operations
  - Non-English speaking growers
  - New irrigation component

Additional Staff Work

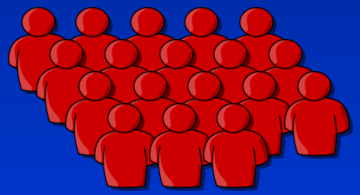
- Review all raw domestic well data
- Review Coalition summary of domestic well data
- Review all farm-level data (Farm Evaluation and INMP summary reports)
- Provide user notification for any polluted domestic wells
- Correlate A/R with management practices and water quality
- Maintain all raw data records for public access

Oversight needs would increase from Coalition summaries to 3,545 individual ESJ grower reports. For the entire ILRP, this would result in over 30,000 individual grower submittals per requirement.

Increase Personnel Years

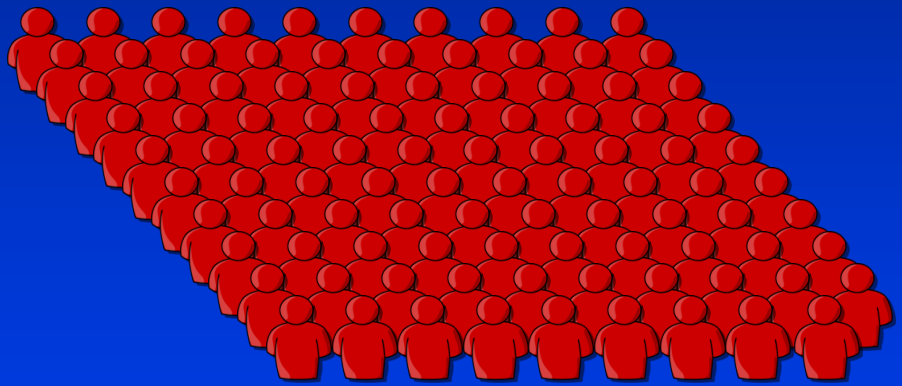
Current PY

18



Proposed PY

99



13267 Implications

13267(b)(1): "… The *burden*, including costs, of [technical or monitoring program] reports *shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports*. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

13267 Implications

- Added reporting costs for growers and coalitions ~ $17.7 million
  - Not including increased WQ fees if ILRP staff grows
- Benefit
  - Vast majority of reports would go unreviewed by staff
- Other means of achieving SWRCB's policy objectives here?

CEQA Implications

- CVWB struck a policy balance after extensive CEQA & economic analysis
- No evidence here that SWRCB has considered this analysis or conducted its own

CEQA Implications

- SWRCB is taking discretionary action
  - Most changes leave CVWB with no discretion
- Draft ESJ Order contains no CEQA findings
- If impacts not analyzed under existing EIR, supplemental EIR required
  - Conversion of prime farmland?
- CEQA compliance required before SWRCB takes action

Recommendations

- Support science based approach in current program to determine groundwater is protected
- Recognize current surface water program complies with NPS Policy
- Require field level reporting as it currently exists in IRLP program

Questions?